**Names and formulas for some “common” acids**

**What is an acid?** (an acid is a compound, which, when dissolved in water, will donate hydrogen ions to the surrounding water….. a simple saying that I will use quite a bit is…. “an acids not really an acid until it is dissolved in water”)

**Names/ formulas for acids** fall into two brancHes (just like regular “salts”),

Binary Acids and Ternary Acids. Their naming system differs.

**Binary Acids:**

• consist of H+ cation and some monatomic (single element) ion. H+ \_\_\_-

• formulas are written to balance charges just like binary ionic compounds.

Examples: H+ Cl- = HCl H+ S-2 = H2S H+ P-3 = H3P

• Names for Binary Acids always start with prefix “hydro” and end with suffic “ic”…. For example from above: hydrochloric acid, hydrosulfuric acid and hydrophosphoric acid.

**Ternary Acids:**

• consist of H+ cation and a Polyatomic anion.

• formulas are written to balance charges just like ternary ionic compounds

Examples: H+ NO3- = HNO3 H+SO4-2 = H2SO4 H+ PO433 = H3PO4

• Names come directly from the polyatomic ion (HYDRO is NOT used in the names of Ternary acids)

HINT: if the polyatomic ion is an “ate” , the acid becomes an “ic” acid (e.g. nitric acid)

If the polyatomic ion is an “ite” , the acid becomes an “ous” acid (e.g. nitrous acid)

For example from above: nitric acid, sulfuric acid and phosphorous acid.

These are the acids that you need to know for the half-test. The few that will be on the half test will come from this list. Write the formula and name for the following:

Ion makeup Formula Name

H+ Cl-  \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H+ NO3- \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H+ NO2- \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H+SO4 -2 \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H+SO3-2 \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H+PO4-3 \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H+PO3-3 \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H+C2H3O2 – \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H+ CO3 -2 \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

H+ OH- (trick question)\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_